





Vapor compression and industrial heat pumps play a decisive role in the use of industrial waste heat – and and are key technologies for the future decarbonization of the industry. Andreas Schnitzhofer, Managing Director of GIG Karasek GmbH, and Christoph Böhnisch, CEO of Piller Blowers & Compressors GmbH, talk about the transition to emission-free processes.

Andreas Schnitzhofer, Managing Director of GIG Karasek GmbH



Christoph Böhnisch, CEO of Piller Blowers & Compressors GmbH

More and more companies are facing the task of decarbonizing their processes. What role does your technology play on the road to climate-neutral industry?

Mr. Schnitzhofer: The industry is currently facing the challenge of rethinking its energy consumption – a process with enormous potential for sustainable transformation. We see ourselves as a driving force, an enabler

and an active partner on this journey. With our heat pump solution, using our innovative CompriVAP technology, we offer companies an effective tool for converting "waste heat" into valuable energy allowing them to sustainably reducing CO₂ emissions on a large scale.

Mr. Böhnisch: For such systems, we produce and supply the heart of the technology and the associated components: our compressors from the VapoLine product line, which can be used to efficiently raise the temperature of waste heat from industrial processes. Their task is to make "lost" process heat usable – with an impressive thermal output of up to 50 megawatts. With a drive power of around 15 megawatts, ideally fed from renewable sources, our compressors enable highly efficient heat generation and are a crucial part of the overall system.

How does your technology enable the efficient use of industrial waste heat and what new potential does it present for economically and ecologically sustainable production? Mr. Böhnisch: The green transformation is a strategic cornerstone of the industry. One key to this is the use of industrial waste heat. Our concept converts this into vapor, which is efficiently brought to a higher temperature by our VapoLine compressors. This allows the energy to be used directly in production, which increases efficiency and reduces ${\rm CO_2}$ emissions — a win for sustainability and competitiveness.

Mr. Schnitzhofer: This is a game changer for us. Today, waste heat often remains unused or is cooled down at great expense. However, it is a valuable resource and a real alternative to fossil fuels. Our solution uses this energy source efficiently. In general, the return on investment is typically realized within two to three years.

What companies are you targeting with your technology?

Mr. Schnitzhofer: Above all, we target large corporations with clear net zero targets. This is where energy efficiency and carbon footprint are at the top of the agenda. Our contacts are often decision-makers at management level.



CompriVAP system from GIG Karasek withVapoLine compressors from PILLER







Mr. Böhnisch: It is also important to engage with technical departments. We analyze specific processes, prepare feasibility studies and in-depth ROI calculations. The economic benefit is the focus for many companies.

The BASF project is a new milestone for your company. What makes it so special?

Mr. Schnitzhofer: With our heat pump system at the Ludwigshafen site, BASF will save 98% of the greenhouse gases generated during the production of formic acid. This is a significant step towards the green transformation of industrial processes.

Mr. Böhnisch: BASF will reduce CO₂ emmissions by up to 100,000 tons every year. Thanks to the scalability and adaptabilityof our compressor technology, a wide range of applications with various wasteheat sources are possible. We see even bigger potential.

Mr. Schnitzhofer: The BASF project is unique worldwide – and a key reference for us all. Even more important, it marks a turning point and shows how great the potential of industrial waste heat recovery really is. It can also inspire other industries to implement similar solutions reducing CO₂ emissions and increase energy efficiency.

Why was PILLER chosen as a partner for the BASF project?

Mr. Schnitzhofer: The plants require enormous amounts of energy, so the efficiency, smooth running and operational reliability of the compressors are crucial. PILLER has decades of experience in the development of high-performance compressors. The VapoLine compressors are not only

optimally matched to our CompriVAP technology, but are also individually designed to meet customer-specific requirements. Together we are setting new standards in vapor compression – beyond BASF and with an impact on the entire industry.

What is the role of PILLER's compressor technology in GIG Karasek's CompriVAP heat pump system?

Mr. Böhnisch: Both companies have decades of experience with vapor. As compressors form the heart of the system, close collaboration is essential. Our compressors are used both in the modernization of existing sites (brownfield) and in new builds (greenfield) – always designed specifically for the customer and optimally tailored to the respective process requirements.

What do you expect for the future of industrial waste heat recovery?

Mr. Böhnisch: Last year, there was much discussion about the promotion of heat pumps in the private sector. However, the conversion of industrial plants could actually be the key to the green transformation. While it is a huge challenge to convert 40 million households, it is much easier to equip a few thousand industrial plants with heat pumps. It is time to recognize this opportunity and bring it more into the focus of political and industrial discussion – because this is where the true potential for a sustainable future lies.



Read the original German <u>FAZ</u> <u>article</u> published on May 21, 2025:

